

## REMARKS / ARGUMENTS

In complete response to the Final Office Action dated February 21, 2006, on the above identified application, reconsideration is respectfully requested. Claims 12-15, 17-24, and 26-40 are pending in this application.

With this amendment, claims 12, 18, 23, 30, and 33 – 35 are amended, and claims 19, 21, 22, 27, 29 and 37 are cancelled.

### Claim Rejections Under 35 U.S.C. § 103:

Claims 12 – 15, 17 – 24, and 26 – 40 currently stand rejected under 35 U.S.C. 103(a) as being unpatentable over Vaidya, et al. (6,051,805) taken with the WIPO document no. WO 02/058878. The Applicants respectfully submit that these claims are not unpatentable over Vaidya '805 taken with WIPO '878.

Vaidya '805 discloses a method and a system of managing an electric arc welding shop. Central to the Vaidya '805 disclosure is the use of a Performance Arc Time Measurement apparatus (the "PATM apparatus") to control the welding process. This **PATM apparatus** is installed on each welding power source, and is used to generate the welding arc, as well as for **calculating and measuring all** the various disclosed parameters (see col. 2, line 34 – 35 of Vaidya '805).

With Vaidya '805, the duty factor and welding efficiency, for the unit on which the PATM device is installed on, is **calculated at the unit**. Vaidya's PATM apparatus is intended to be **self contained** (see col. 2, line 23, and col. 3, line 3) such that all the components necessary to calculate the duty factor and welding efficiency, for each welding unit, **are located together at the individual welding location**. Vaidya's method also requires that in order for duty factor and welding efficiency to be calculated, **each welding unit** is to be provided with a **separate** PATM device (see col. 9, line 29), such that there is a **one to one correlation** between welding units and PATM devices.

In contrast, the present invention teaches a method and system where sensors are located at the welding location, and where these sensors transmit data to a data processing unit and a central remote control device. Both the data processing unit and the central remote control device are located **away from the welding unit** such that duty factor and deposition rate are **not calculated at the welding unit**. As there are

numerous components located at different locations, the system of the present invention **is not self contained**. Finally, the present invention teaches calculating duty factor and deposition rate for numerous welding units, such that there **is not a one to one correlation** as with Vaidya '805.

With respect to WIPO '878, this reference generally discloses the possibility of controlling a welding process from a remote location. Therefore, the combination of Vaidya '805 with WIPO '878 would teach toward a remotely operated welding system which is controlled by a PATM device installed on each power source.

In contrast, the present invention teaches a welding system which does not rely on a PATM apparatus. In the present invention, the calculating and measuring of the wire speed and the current is performed **with a remote sensor**, not a PATM. The sensor data is then transmitted, via a communication network, to a **central remote control device** which controls the overall welding process, as opposed to **local control** at the power source by the PATM.

The remote sensors of the present invention differ greatly from the PATM of Vaidya '805 in that sensors are less expensive, more readily commercially available, and easier to install. Furthermore, the use of one central control device, as taught in the current invention, is an improvement over the PATM apparatus of Vaidya '805 in that it **reduces the number of control devices** and simplifies the welding control process.

A person of ordinary skill in the art would not find that all the elements of the present invention are either suggested or taught by the combination of Vaidya '805 with WIPO '878. Furthermore, a person of ordinary skill in the art would find no motivation to combine these two references. The remotely operated welding system of Vaidya '805 and WIPO '878, which employs **PATM apparatus installed on each power source**, teaches away from the present invention's **centrally controlled remote system** which operates in the **absence of local control**.

For these reasons, the Applicants respectfully contend that this basis for rejection deserves reconsideration.

Appl. No. 10/630,241  
Amdt. dated May 18, 2006  
Reply to Final Office Action of February 21, 2006



## CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the Examiner believe a telephone call would expedite the prosecution of the application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Linda K. Russell".

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Date: May 18, 2006

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### CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18<sup>th</sup> day of May, 2006.

A handwritten signature in cursive script, appearing to read "Diana Guzman".

Diana Guzman